Prediction of *AL* Index on the Basis of the Solar Wind

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An empirical model is introduced to predict *AL* index based on solar wind measurements for the year of 1995. A prediction efficiency of 0.674 and a linear correlation of 0.821 were achieved for the whole year for 10 minute averaged *AL*.

The period of the best fit is from UT00 of June 16 to UT10 of June 18 (total 66 hours) and the prediction efficiency for this time period is 0.884 the correlation coefficient is 0.941 for the same set of model parameters. These results show that the averaged *AL* index is reasonably well predicted by using solar wind as the only input, suggesting that the magnetosphere seems to have an organized response to the solar wind variations down to 10 minutes time-scale.